

Illinois Commerce Commission

**Ameritech – Illinois
OSS Evaluation Project
Draft
Preliminary Metrics Assessment Test
Plan**

Version 1.2

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I. Document Control

Table I-1: Version Control

| Version | Date | Reason |
|----------------|------------------|---------------|
| Draft 1.0 | October 10, 2000 | Draft Release |
| Draft 1.1 | October 19, 2000 | Draft Release |
| Draft 1.2 | October 23, 2000 | Draft Release |
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II. Introduction

A. Background

The Illinois Commerce Commission's approval of the merger of SBC and Ameritech requires Ameritech in Illinois to meet numerous objectives, including:

- Provision of just, reasonable and nondiscriminatory access to its operations support systems (OSS);
- Provision of the documentation and support necessary for competitive local exchange carriers (CLECs) to access and use these systems; and
- Demonstration that Ameritech – Illinois' systems are operationally ready and meet prescribed performance standards.

Pursuant to Order number 98-0555, Condition 29 & 30, the Illinois Commerce Commission (ICC) has ordered a comprehensive test of Ameritech – Illinois' OSS and its CLEC-facing operations to assist the Commission in assessing whether Ameritech – Illinois' is meeting these and other merger requirements. Pursuant to the ICC's order 98-0555 the ICC has retained KPMG Consulting, LLC to design and conduct a "New York" style evaluation of Ameritech – Illinois' OSS. The ICC has instructed KPMG Consulting to prepare a Preliminary Metrics Assessment Test Plan (PMATP) and to begin a limited preliminary review of Ameritech – Illinois' processes and procedures for developing, calculating and reporting several key Performance Metrics in Illinois.

B. Objective

The overall objective of this Preliminary Metrics Assessment Test Plan is to describe an approach for conducting a preliminary assessment of Ameritech – Illinois' systems, processes and procedures used in the development and calculation of its performance metrics. To meet these objectives, KPMG Consulting has developed a test plan of limited breadth and depth to evaluate the collection, transfer and storage of data, as well as the calculation of performance metrics and management of their definitions.

C. Plan Overview

This plan describes the methods and processes to be applied to measure Ameritech – Illinois' performance along with the specific points in the systems and processes where Ameritech – Illinois' performance will be evaluated. The results of the test will be compared against measures and criteria identified by the ICC and other measures and criteria as deemed appropriate by the ICC.

D. Audience and Test Roles

The audience for this document falls into two main categories:

1. Readers using this document during the testing process;
2. Interested parties who have some stake in the result of the Ameritech – Illinois’ OSS evaluation and wish to have insight into the evaluation effort.

The primary users of this document are the ICC and KPMG Consulting. Others are the CLECs, Ameritech – Illinois, the Department of Justice (DOJ), and the Federal Communications Commission (FCC).

Table II-1: Participant Roles

| Participant | Role Description |
|---------------------------------------|--|
| Illinois Commerce Commission | The Illinois Commerce Commission is responsible for directing the overall testing effort. KPMG Consulting will provide results and preliminary evaluation of the results to the ICC. The ICC is responsible for the final evaluation of the test results. |
| KPMG Consulting, LLC | KPMG Consulting will be the Test Manager. The Test Manager has overall responsibility for the preparation of the Preliminary Metrics Assessment Test Plan and the management and execution of the test. This role includes preparing for and conducting the test, providing change control throughout the testing cycle, and reporting results to the ICC. |
| Ameritech Illinois | Ameritech – Illinois will be the test subject. In addition, Ameritech – Illinois will participate in test administration activities and make available its subject matter resources to facilitate the conduct of the test. Additionally, Ameritech – Illinois will provide access to its systems, processes and procedures. |
| CLECs | CLECs may observe the process of developing, conducting and evaluating the tests. |
| Department of Justice | The Department of Justice may observe the process of developing, conducting, and evaluating the tests. |
| The Federal Communications Commission | The Federal Communications Commission may observe the process of developing, conducting, and evaluating the tests. |

The Web addresses <http://www.icc.state.us/> and <http://www.osstesting.com/> contain information on Illinois PMA of Ameritech – Illinois’ Performance Metrics.

E. Snapshot Test Approach

The test is expected to be conducted using a “snapshot” approach. This is believed to be in the best interest of all parties seeking a preliminary assessment of the systems, processes and procedures used in collecting, storing and processing the data, and in calculating and reporting a subset of the performance metrics, for Ameritech – Illinois. The process is expected to work as follows:

- If an issue or problem is encountered during the test, KPMG Consulting will inform the ICC and Ameritech – Illinois by documenting a Preliminary Finding or a Finding describing the situation and providing an assessment:
 - A Preliminary Finding will be created if KPMG Consulting determines that a test reveals one of Ameritech – Illinois’ practices, policies, or system characteristics might result in a negative finding in the final report;

- A Finding will be created if KPMG Consulting determines that a test reveals one of Ameritech – Illinois’ practices, policies, or system characteristics is not expected to satisfy one or more of the evaluation criteria defined for the test.
- Preliminary Findings and Finding status will be discussed weekly by the ICC, KPMG Consulting, and Ameritech – Illinois.
- CLECs will be able to view Findings on KPMG Consulting’s OSS Testing website. (www.osstesting.com).
- Preliminary Findings may or may not become Findings. Also, some Findings will not have been identified previously as Preliminary Findings.
- Ameritech – Illinois may respond to Findings in writing. These responses will describe either a clarification of the issue or Ameritech – Illinois’ intended fix(es) to the problem. The responses will be posted on the ICC website.
- If KPMG Consulting determines that an element of Ameritech – Illinois’ OSS fails to perform as it is documented in materials used by the ICC or CLECs (e.g., on TCNet or CLEC Online, in handbooks, specifications and other such documentation), the documentation in question will be noted.

At the conclusion of this test, there may be open Findings remaining. The ICC will decide how to proceed with such Findings.

F. Assumptions

This section describes the assumptions made in the development of this Test Plan.

- Ameritech – Illinois will provide suitable resources in sufficient numbers to assist KPMG Consulting with the evaluation effort.
- Ameritech – Illinois will provide access to appropriate documentation as requested by KPMG Consulting.
- Ameritech – Illinois will give KPMG Consulting access to historical data and current operational reports, as needed, to complete the evaluation.
- Ameritech – Illinois will allow KPMG Consulting to inspect algorithms that may have a bearing on performance measurements, such as the algorithm used to manage trouble reports.
- Regulatory, legal, and confidentiality issues or concerns can be resolved without significant impact to either the intent of the tests, the ability to execute the tests, or the schedules for their execution.

G. CLEC Involvement in Testing

CLECs interested in the Ameritech - Illinois OSS Preliminary Metrics Assessment will be provided periodic updates on testing status. Additionally, Preliminary Findings and Findings will be posted to the KPMG Consulting OSS Testing website. Inclusion of data provided by the CLECs is not envisioned during this preliminary review, as the “snapshot” nature of this review is intended to focus on a limited number of performance metrics.

It is anticipated that CLECs will play an integral role in the ‘New York’ style testing of Ameritech - Illinois’ OSS which the ICC has directed in its Order 98-0555. It is anticipated that this testing will begin in the first quarter of 2001, and will include a review of the processes and procedures utilized by Ameritech – Illinois in its development and calculation of its performance metrics, along with other tests created when the Illinois Master Test Plan is developed.

H. Communication Forums

KPMG Consulting will work with the ICC to provide numerous informational forums during the test. For example, KPMG Consulting will schedule periodic meetings with the ICC, the CLECs, and Ameritech – Illinois as necessary to address testing status, Findings, and to keep CLECs apprised of all relevant aspects of the project.

I. Document Structure

This section describes the structure of this document. It includes a table that lists each major section number along with a brief description.

Table II-2: Document Overview

| Sect. No. | Section | Content |
|------------------|---|--|
| I | Document Control | Identifies document distribution and necessary approvals. |
| II | Introduction | Documents project background, scope, and objectives, assumptions, and limitations. Includes who should read the document, and how it is structured. |
| III | Test Plan Framework | Describes the methodologies for testing Ameritech – Illinois’ systems, interfaces and processes that support its production of performance metrics. Includes how testing is segmented and organized, testing components, entrance and exit criteria, data acquisition, and traceability. |
| IV | Preliminary Performance Metrics Review Test Section | Describes the methods and procedures for evaluating Ameritech – Illinois’ data collection, transfer, and processing into its performance metrics. |
| Appendix A | Performance Metrics and Standards | Lists metrics for process areas gathered from sources such as the Interim Guidelines. |
| Appendix B | Glossary | Testing terms and definitions used in this document. |

III. Test Plan Framework

This preliminary assessment of the systems and processes Ameritech – Illinois uses to produce a subset of its performance metrics is designed to be a limited review of a subset of the performance metrics that Ameritech – Illinois reports to the ICC. In constructing a Preliminary Metrics Assessment Test Plan, many factors were considered, including the systems and processes to be tested, the measurement points and respective evaluation criteria, and the necessary conditions required to stage a successful, efficient, and objective test. The Test Manager is expected to execute all tests listed in this plan.

To conduct a complete and thorough test of those performance measures that have been selected by the ICC, the Preliminary Metrics Assessment Test Plan framework has three key dimensions:

- Test Domains
- Test Processes
- Evaluation Criteria

The *test domains* define the systems and processes about which the performance measurements provide information.

Test processes and *evaluation criteria* define **how testing will be conducted**. *Test processes* define the techniques, measures, inputs, activities, and outputs of each component test. *Evaluation criteria* serve as the basis for evaluation by defining the norms against which test results are compared.

These concepts are discussed in more detail in the following sections.

A. Test Domains

The areas captured by the Performance Measurements exist in four domains that mirror the major business functions performed by a telecommunications carrier:

- Pre-Order, Order, and Provisioning (POP)
- Maintenance and Repair (M&R)
- Billing (BLG)
- Relationship Management and Infrastructure (RM&I)

These four domains are useful in defining the areas captured by the performance metrics, and the specific measures to be reviewed.

1.0 Pre-Order, Order, and Provisioning Domain

This domain is comprised of the systems, processes, and other operational elements associated with Ameritech – Illinois’ support for Pre-Ordering, Ordering, and Provisioning activities for wholesale services and unbundled network elements. Performance measurements track Ameritech – Illinois’ performance with some pre-order, order and provisioning tasks.

2.0 Maintenance and Repair Domain

This domain is comprised of the systems, processes, and other operational elements associated with Ameritech – Illinois’ support for wholesale maintenance and repair activities. Performance measurements track Ameritech – Illinois’ performance with some maintenance and repair tasks.

3.0 Billing Domain

This domain is comprised of the systems, processes and other operational elements associated with Ameritech – Illinois’ support for wholesale billing. Performance measurements track Ameritech – Illinois’ performance with some billing tasks.

4.0 Relationship Management & Infrastructure Domain

This domain is comprised of the systems, processes and other operational elements associated with Ameritech – Illinois’ establishment and maintenance of business and technical relationships with the CLECs. Performance measurements track Ameritech – Illinois’ performance with some RM&I tasks.

B. Test Processes

The Performance Measurements Review Test Section defines specific test processes to be executed. In general, this review will focus on an operational analysis of Ameritech – Illinois’ performance metrics process for a number of key measures.

Tests utilizing operational analysis focus on the form, structure, and content of the business process under study. This test method will be used to evaluate day-to-day operations and operational management practices, including policy development, procedural development, and procedural change management. Operational analysis validates and verifies the results of a process to determine that the process functions correctly and according to documentation and expectations. Operational analysis also tests compliance by reviewing management practices and operating procedures against legal, statutory, and other requirements.

C. Evaluation Criteria

Measures and their corresponding evaluation criteria provide the basis for conducting tests. Evaluation criteria are the norms, benchmarks, standards, and guidelines used to evaluate measures identified for testing. Evaluation criteria provide a framework for the scope of tests,

the types of measures that must be taken during testing, and the approach necessary for analyzing results.

There are two types of evaluation criteria, as shown in the table below.

Table III-2: Evaluation Criteria

| Evaluation Criteria Type | Description | Examples |
|---------------------------------|---|--|
| Quantitative | These criteria set a threshold for performance where a numerical range of values is possible, such as response time. | Calculation of pre-order response time metric using Ameritech – Illinois' source data. |
| Qualitative | These criteria set a threshold for performance where a range of quality values is possible, such as level of customer satisfaction. | Documentation defining that data storage is adequate. |

The evaluation criteria to be applied in the overall test effort are based largely on the legal and regulatory requirements for functionality and performance applicable to Ameritech – Illinois' OSS. Overall, evaluation criteria are derived from three types of sources, as shown below.

Table III-3: Sources of Evaluation Criteria

| Evaluation Criteria Source Types | Description |
|---|---|
| Legal and Regulatory Requirements | Requirements specified by statute and regulation, such as FCC orders, court orders, ICC regulations, federal and state statutes, and other binding requirements such as interconnect agreements and others resulting from judicial or governmental proceedings. (State and federal proceedings that the Test Manager uses in evaluation of legal and regulatory requirements will be cited in the final report.) |
| Consensus Requirements | Norms, benchmarks and standards developed by formal consensus proceedings. |
| Good Management Practices (GMP) | Widely recognized standards and guidelines promulgated by sanctioned industry and governmental organizations and other bodies (e.g., Association for Telecommunications Industry Solutions (ATIS), Ordering and Billing Forum (OBF), Telecommunications Industry Forum (TCIF)); also includes benchmarks, performance goals, and guidelines derived from industry and topic area experts, Ameritech – Illinois and CLEC performance targets, publications, academic journals and other sources. |

D. Test Process Elements

For every test defined within each test family, the test process includes a description of the test, its objectives, the targets and scope of the test, the measures to be used, the test's inputs, activities, and outputs, as well as entrance and exit criteria. Several key test process elements are described in the following sections. Each test process specifies the evaluation techniques

used to capture and analyze information developed during testing and the evaluation measures used to conduct testing.

Throughout this review, KPMG Consulting will review metrics testing in other states in the Ameritech – Illinois region to determine whether the results of those tests may be applicable to any specific portion of this Preliminary Metrics Assessment Test Plan. Results of this analysis will be shared with the ICC. KPMG Consulting may recommend to the ICC to utilize the results of those tests rather than conducting duplicative testing, where KPMG Consulting can attest that the testing done in other states is independent and reliable and can be used as a basis for evaluation acceptable to the ICC or its representatives. To be considered duplicative, a test must meet the specifications listed in the Illinois PMATP.

1.0 Global Entrance Criteria

Entrance criteria are those requirements that must be met before individual tests can commence. Global entrance criteria, which apply to every individual test (except where noted otherwise), include the following:

1. The Preliminary Metrics Assessment Test Plan has been approved.

Pursuant to the ICC's order 98-0555 this Preliminary Metrics Assessment Test Plan was authorized to be developed by the ICC and is to be implemented under the ultimate direction of the ICC. This initial approval is for the purpose of commencing the test with all deliberate speed, and it does not bind the ICC Staff in taking positions or the ICC in deciding issues that will be addressed upon completion of the test. Further, any ongoing input by the ICC Staff during the implementation of the test will be offered in good faith based on available information at that time, but will not bind or restrict the ICC Staff or the ICC in taking formal positions or reaching subsequent conclusions on the same issue or related issues.

2. All relevant legal dependencies have been resolved.

Any pending legal and regulatory proceedings that impact the ability to perform the test must be concluded in a manner, which allows testing to proceed. Any necessary legal or regulatory approvals must be secured.

3. The performance measurements to be used in the test are determined.

The performance metrics to be used in this test are a subset of the "business Illinois' OSS Performance Measurements Collaborative. At the commencement of the test, the Test Manager will use the most current version of the business rules agreed to by Ameritech – Illinois and the ICC. Fully functional Ameritech – Illinois' measurements are required to support collection of test results and to ensure a method exists to monitor on-going compliance. The Test Manager will assess the operational readiness of

the required Ameritech – Illinois’ measurements and verify that all requirements have been met.

Table III-4: Global Entrance Criteria

| Criteria | Responsible Party |
|---|-------------------------------------|
| The Test Plan has been approved. | Subject to ongoing ICC Jurisdiction |
| All relevant legal dependencies have been resolved. | Ameritech – Illinois |
| The performance measurements to be used in the test are determined. | Subject to ongoing ICC Jurisdiction |

2.0 Global Exit Criteria

Exit criteria are the requirements that must be met before the tests defined in the Test Plan can be concluded. The Exit Criteria must be met prior to KPMG Consulting providing its report to the ICC as described in this PMATP.

1. All test activities required by the PMATP must be completed.

For each test, all fact finding and analysis activities must be completed. All results and test methodologies have been documented.

2. All change control, verification, and confirmation steps have been completed.

The results of test activities must be documented and reviewed for accuracy. Any results that require clarification or follow-up are confirmed.

Table III-6: Global Exit Criteria

| Criteria | Responsible Party |
|--|-------------------|
| All required test activities must be completed. | Test Manager |
| All change control, verification, release management and confirmation steps have been completed. | Test Manager |

3.0 Evaluation Techniques

Each test relies on one or more techniques to collect and record measurements and analyze the results. The five types of techniques defined for this test are described in the chart below.

Table III-7: Evaluation Techniques

| Technique | Description |
|---------------|---|
| Report Review | Review and analysis of historical data, reports, metrics, and other information in order to assess the effectiveness of a particular system or business function. This includes performance measurement reports and other management reports. |

| Technique | Description |
|------------------|--|
| Inspection | Physical review of process activities and products, including site visits, walk-throughs, read-throughs, and work center observations. |
| Document Review | Compilation and review of books, manuals, and other publications related to the process and system under study. |
| Calculation | Verification of company calculations to evaluate accuracy and reconciliation to assure completeness of the data. |
| Interviews | Examination of processes or results through questioning Ameritech – Illinois' management and staff. |

IV. Preliminary Performance Metrics Assessment

A. Purpose

The purpose of this section is to define the specific tests to be undertaken in evaluating the systems, processes, and other operational elements associated with Ameritech – Illinois' support for several of its Performance Metrics (Service Quality Measurements [SQM]). The Preliminary Performance Metrics Assessment will be initiated as soon as possible. This performance measurements review will determine if Ameritech – Illinois has properly implemented several of the Commission required parity and performance standards measurements, and the reliability of the data. This section defines the specific tests to be undertaken in the review of the performance metrics.

The Preliminary Performance Metrics Assessment will be conducted using the United States General Accounting Office Government Auditing Standards related to issues of performance reviews as applicable to public utilities, as determined by KPMG Consulting in the exercise of its reasonable professional judgment in consultation with ICC staff.

B. Organization

The Preliminary Performance Metrics Review is organized into three test target areas, which represent the key focus areas for testing in this domain. The Preliminary Performance Metrics Assessment scope section contains a series of tables that identify the specific tests to be associated with each target test area. The tables are organized based upon test subject matter.

The subsequent section, Preliminary Performance Metrics Assessment "Test Process," provides additional information and tables that further define the testing approach, inputs, outputs, as well as entrance and exit criteria.

C. Scope

The Preliminary Performance Metrics Review test family is comprised of three test target areas, representing important and generally distinct areas of effort undertaken by Ameritech – Illinois. The three test target areas are:

- Standards & Definitions
- Data Processing
- Data Retention

Each target test area is further broken down into a number of increasingly discrete Process and Sub-Process Areas that serve to identify the test details and procedures.

D. Test Process

Five tests have been designed to address the three test target areas. The organization of the subject test processes is as follows:

- PMR1: Data Collection and Storage Verification and Validation Review
- PMR2: Metrics Definitions and Standards Development and Documentation Verification and Validation Review
- PMR3: Metrics Change Management Verification and Validation Review
- PMR4: Metrics Data Integrity Verification and Validation Review
- PMR5: Metrics Calculations and Reporting Verification and Validation Review

The three test target areas and five metrics tests will review a subset of the SQMs that Ameritech – Illinois is currently reporting, in part based on requirements of state and federal regulators. The metrics to be used in the test will be determined by the ICC before the test commences. This determination will be based on input from representatives from CLECs active in Illinois, KPMG Consulting, Ameritech – Illinois, and ICC Staff. When these SQMs have been determined, they will be listed in Appendix A.

The Preliminary Performance Metrics Assessment will involve an examination of one month of live industry data. The tests will involve an investigation of the processes both for developing the metrics and for deriving the standards derived from retail analogs. That is, both CLEC and Retail data will be included in the test.

1.0 Test PMR1: Data Collection and Storage Verification and Validation Review

1.1 Description

This test evaluates key policies and practices for collecting and storing raw and target data necessary for the creation of the subset of the selected performance metrics. The procedures both for data used in the calculation of the metrics and data required for the calculation of retail analogs will be included. This test will rely on checklists, document reviews and inspections.

1.2 Objectives

The objectives of this test are to determine the adequacy and completeness of key policies and procedures for collecting and storing performance data. This test will also evaluate the extent to which Ameritech – Illinois’ operations are consistent with the documented policies and procedures – i.e., are the policies and procedures being followed consistently.

1.3 Entrance Criteria

| Criteria | Responsible Party |
|---------------------------------------|--------------------------|
| Global Entrance Criteria requirements | See Table III-4 |
| Process evaluation checklist | Test Manager |
| Interview guides | Test Manager |

1.4 Test Scope

Table IV-1 Test Target: Data Collection and Storage Verification and Validation Review

| Process Area | Sub Process/ Attribute | Evaluation Measure | Evaluation Technique | Criteria Type |
|---------------------|---|---|--|----------------------|
| Collection of Data | Collection policies & procedures for CLEC and retail data | Adequacy and completeness of collection policies and procedures | Inspection Document review Report review | Qualitative |
| | Identification of collection points | Applicability of and measurability from control points | Inspection | Qualitative |
| | Existence of collection tools | Adequacy and scalability of data collection tools | Inspection | Qualitative |
| | Internal Controls | Adequacy and completeness of the internal control process | Inspection Document review Report Review | Qualitative |

| Process Area | Sub Process/ Attribute | Evaluation Measure | Evaluation Technique | Criteria Type |
|-----------------|--|--|--|---------------|
| Storage of Data | Storage policies & procedures for CLEC and retail data | Adequacy and completeness of storage policies and procedures | Inspection Document review Report review | Qualitative |
| | Identification of storage sites | Applicability of and measurability from control points | Inspection | Qualitative |
| | Existence of storage tools | Adequacy and scalability of data storage tools | Inspection | Qualitative |
| | Internal Controls | Adequacy and completeness of the internal control process | Inspection Document review Report Review | Qualitative |

1.5 Test Approach

| Inputs | Activities | Outputs |
|---|--|---|
| <ul style="list-style-type: none"> Ameritech – Illinois Metrics Policies and Processes Documentation Ameritech – Illinois Metrics Definition Documentation Other procedural and technical documentation Evaluation checklists Interview guides | <ul style="list-style-type: none"> Gather information Review collection and storage policies and procedures for both CLEC data and data used in calculations of retail analogs Perform walkthroughs of Ameritech – Illinois facilities that are relevant to the production of performance measurements Perform interviews and documentation reviews Complete evaluation checklists and interview summaries Develop and document findings | <ul style="list-style-type: none"> Completed evaluation checklists and interview summaries Summary report |

1.6 Exit Criteria

| Criteria | Responsible Party |
|--|-------------------|
| Limited to Global Exit Criteria requirements | See Table III-6 |

2.0 Test PMR2: Metrics Definitions and Standards Development and Documentation Verification and Validation Review

2.1 Description

This test evaluates the overall policies and practices for developing, documenting and producing metrics definitions and standards for the selected set of performance metrics. This test will rely on checklists, document reviews and inspections.

2.2 Objectives

The objectives of this test are to determine the adequacy and completeness of key procedures for developing, documenting, and producing standards and definitions for performance metrics.

2.3 Entrance Criteria

| Criteria | Responsible Party |
|---------------------------------------|--------------------------|
| Global Entrance Criteria requirements | See Table III-4 |
| Process evaluation checklist | Test Manager |
| Interview guides | Test Manager |

2.4 Test Scope

Table IV-2 Test Target: Metrics Definition and Standards Development and, Documentation Verification and Validation Review

| Process Area | Sub Process/ Attribute | Evaluation Measure | Evaluation Technique | Criteria Type |
|-----------------------|--|--|--|----------------------|
| Metrics Definitions | Documentation of Metrics Definitions | Adequacy and completeness of Metrics Definitions | Inspection Document review Report review | Qualitative |
| | Distribution of Metrics Definitions | Adequacy and completeness of the distribution of the Metrics Definitions | Inspection Document review Report review | Qualitative |
| Standards Definitions | Documentation of Standards Definitions | Adequacy completeness of Standards Definitions | Inspection Document review Report review | Qualitative |
| | Distribution of Standards Definitions | Adequacy and completeness of the distribution of the Standards Definitions | Inspection Document review Report review | Qualitative |

2.5 Test Approach

| Inputs | Activities | Outputs |
|---|--|--|
| <ul style="list-style-type: none">- Ameritech – Illinois Metrics Development Documentation- Ameritech – Illinois Metrics Definitions Documentation- Other procedural and technical documentation that may be appropriate- Evaluation checklists- Interview guides | <ul style="list-style-type: none">- Gather information- Perform interviews and documentation reviews- Complete evaluation checklists and interview summaries- Develop and document findings | <ul style="list-style-type: none">- Completed evaluation checklists and interview summaries- Summary report |

2.6 Exit Criteria

| Criteria | Responsible Party |
|--|-------------------|
| Limited to Global Exit Criteria requirements | See Table III-6 |

3.0 Test PMR3: Metrics Change Management Verification and Validation Review

3.1 Description

This test evaluates the overall policies and practices for managing the change of the standards and definitions in the set of Ameritech – Illinois’ metrics that KPMG Consulting is testing, and the calculation of the metrics, and the communication of these changes to the ICC and the CLECs. This test will rely on checklists, document reviews and inspections.

3.2 Objectives

The objectives of this test are to determine the adequacy and completeness of key procedures for developing, conducting, monitoring and publicizing change management of the set of tested performance metrics. This test will also evaluate the extent to which Ameritech – Illinois’ practices and procedures used to effect change in the performance metrics systems conform to the documented Ameritech – Illinois’ change management process for performance metrics.

3.3 Entrance Criteria

| Criteria | Responsible Party |
|---|----------------------|
| Global Entrance Criteria requirements | See Table III-4 |
| Process evaluation checklist | Test Manager |
| Interview guides | Test Manager |
| Ameritech – Illinois’ written Change Management Process for performance metrics | Ameritech – Illinois |

3.4 Test Scope

Table IV-3 Test Target: Metrics Change Management Verification and Validation Review

| Process Area | Sub Process/ Attribute | Evaluation Measure | Evaluation Technique | Criteria Type |
|-------------------|-----------------------------|---|--|---------------|
| Change Management | Developing Change Proposals | Completeness and consistency of change development process | Inspection Document review Report review | Qualitative |
| | Evaluating Change Proposals | Completeness and consistency of change evaluation process | Inspection Document review Report review | Qualitative |
| | Implementing Change | Completeness and consistency of change implementation process | Inspection Document review Report review | Qualitative |
| | Intervals | Reasonableness of change interval | Inspection Document review Report review | Qualitative |
| | Documentation | Timeliness of documentation updates | Inspection Document review Report review | Qualitative |
| | Tracking Change Proposals | Adequacy and completeness of change management tracking process | Inspection Document review Report review | Qualitative |

3.5 Test Approach

| Inputs | Activities | Outputs |
|--|---|---|
| <ul style="list-style-type: none"> Ameritech – Illinois Metrics Policies and Processes Documentation Other procedural and technical documentation Evaluation checklists Interview guides | <ul style="list-style-type: none"> Gather information Perform interviews and documentation reviews Complete evaluation checklists and interview summaries Develop and document findings | <ul style="list-style-type: none"> Completed evaluation checklists and interview summaries Summary report |

3.6 Exit Criteria

| Criteria | Responsible Party |
|--|-------------------|
| Limited to Global Exit Criteria requirements | See Table III-6 |

4.0 Test PMR4: Metrics Data Integrity Verification and Validation Review

4.1 Description

This test evaluates the overall policies and practices for processing the data used by Ameritech – Illinois in the production of the set of reported performance metrics and standards being tested. This test will rely on document reviews, inspections and sampling of partially converted data.

4.2 Objectives

The objective of this test is to determine the integrity of key procedures for processing the data necessary for the production of performance metrics.

4.3 Entrance Criteria

| Criteria | Responsible Party |
|---------------------------------------|--------------------------|
| Global Entrance Criteria requirements | See Table III-4 |
| Process evaluation checklist | Test Manager |
| Interview guides | Test Manager |
| Preliminary analysis of PMR 5 | Test Manager |

4.4 Test Scope

Table IV-4 Test Target: Metrics Data Integrity Verification and Validation Review

| Process Area | Sub Process/ Attribute | Evaluation Measure | Evaluation Technique | Criteria Type |
|---------------------|---|---|--|----------------------|
| Data Integrity | Transfer of data from point(s) of collection | Adequacy and completeness of the data transfer process | Inspection Document review Report review | Qualitative |
| | Conversion of data from raw to processed form | Adequacy and completeness of the conversion policies and procedures | Inspection Document review Report review | Qualitative |
| | Internal Controls | Adequacy completeness of the internal control process | Inspection Document review Report review | Qualitative |

4.5 Test Approach

| Inputs | Activities | Outputs |
|--|--|---|
| – Ameritech – Illinois Metrics Definitions Documentation | – Gather information – Perform interviews and | – Completed evaluation checklists and interview |

| | | |
|---|---|--|
| <ul style="list-style-type: none">- Other procedural and technical documentation- Evaluation checklists- Interview guides | <ul style="list-style-type: none">- documentation reviews- Complete evaluation checklists and interview summaries- Gather sample of data- Analyze data- Develop and document findings | <ul style="list-style-type: none">- summaries- Summary report |
|---|---|--|

4.6 Exit Criteria

| Criteria | Responsible Party |
|--|-------------------|
| Limited to Global Exit Criteria requirements | See Table III-6 |

5.0 Test PMR5: Metrics Calculations and Reporting Verification and Validation Review

5.1 Description

This test evaluates the processes used to calculate performance metrics and retail analogs. The test will rely on re-calculating a set of agreed upon metrics and retail analogs and reconciling any discrepancies to verify and validate the reporting of the metrics. The test will use one month of Ameritech – Illinois’ retrospective data. This test will also analyze the documentation published by Ameritech – Illinois about metrics and the consistency between the documentation and the procedures used for calculating metrics. The test will rely on checklists, document reviews, inspections, and standard statistical techniques.

5.2 Objectives

The objectives of this test are to determine the accuracy of recent metrics calculations and to verify that the metrics, as produced by Ameritech – Illinois, are consistent with its documentation and stated objectives.

5.3 Entrance Criteria

| Criteria | Responsible Party |
|---------------------------------------|-------------------|
| Global Entrance Criteria requirements | See Table III-4 |

5.4 Test Scope

Table IV-5 Test Target: Metrics Calculations and Reporting Review Verification and Validation Review

| Process Area | Sub Process/ Attribute | Evaluation Measure | Evaluation Technique | Criteria Type |
|------------------------------------|----------------------------------|---|----------------------|---------------|
| Metrics Calculations and Reporting | Accuracy of metrics calculations | Ability to recreate calculations of metrics values and retail analogs | Calculation | Quantitative |
| | Documentation | Consistency between definitions and metrics calculations programs | Document review | Qualitative |

5.5 Test Approach

| Inputs | Activities | Outputs |
|--|---|---|
| <ul style="list-style-type: none"> Ameritech – Illinois definitions and standards as verified by PMR2 Ameritech – Illinois target database as verified and validated by PMR1 Ameritech – Illinois Metrics Definition Documentation Other procedural and technical documentation Evaluation checklists Interview guides | <ul style="list-style-type: none"> Gather information Perform interviews and documentation reviews Complete evaluation checklists and interview summaries Gather data Recreate performance metrics from target data Develop and document findings | <ul style="list-style-type: none"> Completed evaluation checklists and interview summaries Completed performance metrics calculations Summary report |

5.6 Exit Criteria

| Criteria | Responsible Party |
|--|-------------------|
| Limited to Global Exit Criteria requirements | See Table III-6 |

Appendix A: Performance Metrics and Standards

The subset of the Performance Metrics and Standards selected for this test by the ICC are listed below.

Ameritech – Illinois’ performance measures web site is located at <https://CLEC.SBC.COM>.

Selected Performance Measures

Pre-Order, Order and Provisioning (POP)

PM 5 – % Firm Order Confirmations Returned within “X” hours

- Manually Submitted – Residential and Business < 24 hours
- Electronically Submitted – Residential and Business < 5 hours
- Electronically Submitted – UNE Loop (1-49 loops) < 5 hours

PM 13 – Order Process % Flow Through

- UNE Loops
- Resale

PM 27 – Mean Installation Interval

- POTS Residential - Field Work
- POTS Business - Field Work
- UNE Combinations

PM 55.1 – Average Installation Interval – DSL

- Loop Requiring Conditioning
- Loops Requiring no Conditioning

PM 115 – % of Ameritech Caused Delayed Coordinated Cutovers

- LNP > 30 minutes
- LNP w/ Loop > 60 minutes

Billing

PM 17 – Billing Completeness - ACIS/CABS

Maintenance and Repair (M&R)

PM 24 – Local Operations Center (LOC) Average Speed of Answer

PM 38 – % Missed Repair Commitments

- POTS - Residence Dispatch
- POTS - Business Dispatch
- UNE Combinations - Dispatch

PM 39 – Average Receipt to Clear Duration

- POTS - Residential Dispatch Out of Service (hours)
- POTS - Business Dispatch Out of Service (hours)
- UNE

PM 40 – % Out of Service < 24 Hours

- POTS Residential
- POTS Business
- UNE Combinations

Relationship management and Infrastructure (RM&I)

PM 107 – % Missed Collocation Due Dates

- Physical

Appendix B: Glossary

| Term | Definition |
|----------------------|--|
| ACIS | Ameritech Customer Information System for resale customers. All customer records are kept in this system. |
| AEBS | Ameritech Electronic Bill Service which creates monthly billing detail by state. |
| AEMS | Ameritech Electronic Messaging System. This front end system identifies what type of pre-order transaction was request. |
| ALPS | Ameritech Listing Publishing Services is the entity that publishes Ameritech directory listings. |
| AMA | Automatic Message Accounting. A system that records and documents billing information for (long distance) calls made by a (corporate) subscriber. |
| ARES | Ameritech Records and Engineering System. This system contains the plant inventory, detailed loop make-up information, and load coil information. |
| ARIS/EXACT | Ameritech Access Request Information System. This system receives the ASRs and validates and processes them. ARIS generates the service order formatted with the USOCs and FIDs. |
| ASC | Ameritech Access Service Centers. |
| ASON/ACIS | Ameritech Service Order Negotiation System. The system in which orders are processed for Resale, UNE, and TNs. |
| ASR | Access Service Request. Form used to order interoffice facilities such as dedicated trunk ports. |
| Bill Certification | Process by which Ameritech demonstrates billing process management to its Reseller customers. |
| Bill Cycle | The grouping of customers for purposes of billing. An end-user normally belongs to one bill cycle. In Wholesale billing, all end-users belonging to the same bill cycle are aggregated onto a single CLEC bill. Assignments of cycle and period are accomplished by Ameritech. Bill cycles enable even distribution of a large number of customers so as to allow efficient use of computing resources and to mitigate risks associated with computer failures. |
| Bill Cycle Balancing | The procedure by which the charges associated with the inputs of a billing cycle are reconciled with the charges of the outputs of the billing cycle. |
| Bill Period | The length of time covered by a customer bill. Each end-user has one bill per bill period. CLECs receive one bill per bill period and bill cycle for all end-users belonging to that period and cycle. Assignments of cycle and period are accomplished by Ameritech. |
| Billing Domain | Tests related to creation of correct carrier bills. |
| Black Box | Internal processes within Ameritech systems that are considered out of scope for the purposes of this test plan. Correct functioning of 'black box' systems can be inferred from input and output interface files. |
| BTN | Billing Telephone Number. The number to which charges from a given telephone service are billed. |
| BTN Accounts | Billing Telephone Number accounts. These accounts represent "dummy" phone numbers which are used to aggregate a Reseller's charges into a consolidated bill. Reseller's have several separate BTN accounts. |
| CABS | Carrier Access Billing System that creates and maintains customer account information, receives service order input from PBSI, applies wholesale rates for elements using USOC rate tables, and creates a monthly bill by state. |

| Term | Definition |
|---|---|
| CAMPS | Common Ameritech Message Processing System. The system upgrades the usage guide for the TN, accumulates and formats usage for the DUF, and rates resale usage. |
| CAP | Competitive Access Provider. Facilities-based carrier providing alternative access service. |
| CSR | Customer Service Record. Details of a customer's fixed monthly charges billed by the local telephone company. |
| Carrier Bill Code | Each bill format has its own unique code. Particular charges will cause the production of a specific bill format. The code is related to each product, and determines on which bill the product will appear. |
| Casual Usage | Usage dialed through a calling card or 10XXXXXX. |
| Central Office (CO) | Facility where subscribers' lines connect to switching equipment. |
| Change Management | The process by which changes are introduced at Ameritech - . Important steps include: 1) Advance notification that a change will occur; 2) CLEC input is considered when making changes; and 3) Smooth roll-out of the change. |
| CLEC | Competitive Local Exchange Carrier. |
| CLEC Live Data | Production data delivered through interfaces that are already operational for real CLEC customers. |
| Customer Account Record Exchange (CARE) | Industry standard for formatting exchange of subscription information. |
| Daily Usage Feed | A daily download of usage data from the switch which is delivered to Ameritech - ' message processing system and directly to the CLEC. |
| DID number block | Direct Inward Dialing. A block of numbers reserved for a Centrex/PBX. DID allows internal dialing by entering only extensions. |
| Document review | Compilation and review of books, manuals, and other publications related to the process and system under study. |
| EBTA | Ameritech Electronic Bonding and Trouble Administration system is where CLECs submit trouble tickets for maintenance and repair issues. |
| EDI | Electronic Data Interchange. A process for exchanging information that is subject to industry standards. |
| EMI / EMR | Exchange Message Interface / Record. Standard format in which usage data is passed to the Reseller, as specified by Bellcore. |
| EXACT | Ameritech Exchange Access Control and Tracking system provides mechanized order entry, control, and tracking support. |
| Entrance and Exit Criteria | The necessary conditions for starting or completing individual tests described in the Test Plan. |
| Evaluation Measures | Discrete set of measures to be applied to specific test components. |
| Existence Criteria Type | These are criteria where only two possible test results can exist (e.g., true/false, presence/absence), such as whether a document exists or does not exist. |
| Expected Results Worksheet | A report format that lists the expected results for each test while allowing the tester to record the current results of the test. This allows an easy comparison of numbers. |
| FID | Field Identifier. A code used when administering usage limits on residence and business end users. Also refers to fields of information used in the service order. |
| Firm Order Confirmation | A response from Ameritech Service Order Confirmation that acknowledges a successful receipt of an order from a CLEC and provides a committed due date. Such committed due date may change or be canceled, but only in accordance with the Facility Modification Policy. |

| Term | Definition |
|---|---|
| Flow-through | An order placed by a CLEC's customer service representative that can be provisioned correctly without manual intervention by Ameritech service representatives. |
| GUI | Graphical User Interface. A computer interface that allows users to access programs and enter data. |
| Good Management Practice (GMP) Guidelines criteria source | This includes benchmarks, performance goals, and guidelines derived from industry and topic area experts, Ameritech and CLEC performance targets, publications, academic journals and other sources. |
| ILEC | Incumbent Local Exchange Carrier. The local exchange carrier for a particular area as of 1996. Ameritech is the relevant ILEC. |
| Inspection | Physical reviews of process activities and products, including site visits, walk-throughs, read-throughs, and work center observations. |
| LATA | Local Access and Transport Area. A geographic area established by law within which a Bell Operating Company may provide telecommunications services. |
| LFACS/FACS | Ameritech Loop Facility Assignment Center System and Facility Assignment Center. Ameritech system that performs order analysis and control functions as well as building outside plant facilities. The system also assigns loop facilities and CO assignments. |
| LOC | Ameritech Local Operations Center is the primary point of interface for provisioning and maintenance issues related to unbundled network elements. |
| LSC | Ameritech Local Service Center is responsible for processing the orders, is the interface for issues related to orders, and is the first escalation point for matters relating to orders. |
| Legal and Regulatory Requirements criteria source | This includes requirements specified by statute and regulation, such as FCC orders, court orders, ICC regulations, federal and state statutes, and other binding requirements resulting from judicial/governmental proceedings. |
| Logging | Monitoring activities and collecting information by logging process events and products as they happen. Logging can be mechanized or manual. |
| LPIC | Pre-designated Intra-LATA Carrier, or Local Primary Interexchange Carrier. Telephone company chosen by the end user as being the default carrier for calls outside the local calling area, but within the same LATA. These are also known as regional toll calls. |
| LSR | Local Service Request. Form sent to Local Exchange Carrier requesting local telephone services. |
| MARCH | Ameritech system component that assigns the Central Office loop translations/line site and activates service based on due date information. |
| MDF | Main Distribution Frame. The primary point at which outside plant facilities terminate within a Wire Center for interconnection to other telecommunications facilities within the Wire Center. |
| MOR | Ameritech Mechanical Order Receipt System is the centralized order translator. |
| MOR/Tel | Ameritech application which tracks order status and services and is the service center interface. It contains the state specific rules. |
| MWA | Ameritech Mechanized Work Assignment system automatically assigns new ASRs to workgroups or individuals. |
| Maintenance and Repair Domain | Tests related to trouble administration. |
| Preliminary Metrics Assessment Test Plan | Identifies the overall framework and structure of the test. |

| Term | Definition |
|---|--|
| NSDB | Ameritech Network Services Database system which receives assigned service orders and stores them in the network service database. |
| OCN | Operating Company Number. A 4 character code to identify any service provider. Specifically used to identify the Reseller on usage detail records. |
| Operational Analysis | Operational analysis focuses on the form, structure, and content of the business process under study. This method is used to evaluate day-to-day operations and operational management practices. |
| ICC | Commerce Commission. A state regulatory agency responsible for telecommunications companies. |
| OSS | Operation Support Systems. Systems used to perform pre-ordering, ordering, provisioning, maintenance and repair, and billing. |
| PAWS | Ameritech Provisioning Analyst Workstation is an error manager for FACS. |
| PBSI | Ameritech Provisioning and Billing System Interface communicates with FACS and CABS. |
| PIC | Primary Interexchange Carrier. The long distance company to which traffic is automatically routed when an end user dials 1+ in equal access areas. |
| PTE | Ameritech Post TUF Editor system edits service order formats. |
| Parity Criteria Type | These are criteria that require two measurements to be developed and compared, such as whether external response time is at least as good as internal response time. |
| Performance and Capacity | Methods used to evaluate the performance and capacity of selected elements within the four domains. Relates to tests to determine if Ameritech OSS can handle quantities of orders matching a reasonable forecasted demand. |
| Port | Point of access into a network. |
| Pre-Ordering, Ordering, and Provisioning Domain | Tests related to CLEC's acquisition of customer information, placing orders, and ensuring correct and timely provision and notification of order status. |
| Provisioning | The act of supplying telecommunications service or UNEs. |
| Qualitative Criteria Type | These criteria set a threshold for performance where a range of quality values is possible, such as level of customer satisfaction. |
| RBS | Ameritech Resale Billing System. The system receives ACIS extract and applies wholesale rates to non-usage elements using the resale USOC rate table. It also receives rated usage from CAMPS and reformat. |
| RID | Ameritech Reseller Information Desktop system applies term/volume discounts, performs installment billing calculations, and assesses late charges. |
| Recognized Standards Criteria Source | This includes widely recognized standards and guidelines promulgated by sanctioned industry and governmental organizations and other bodies. |
| Relationship Management and Infrastructure Domain | Tests relating to activities, processes and documents that are focused on the establishment and maintenance of the CLEC/ILEC relationship. |
| Report Review | Reviews and analysis of historical data, reports, metrics, and other information in order to assess the effectiveness of a particular system or business function. This includes performance measurement reports and other management reports. |
| Resource Center | Ameritech center for CLEC OSS Interface trouble referrals. |
| SAG | Ameritech Street Address Database. |
| SAM | Ameritech Service Access Manager is a middleware system that provides a common way to interface with all systems. This system finds and formats the data from the legacy systems. |
| SOAC | Ameritech system for Service Order Assignment and Control. The system receives service orders and routes the work components to the other provisioning systems. |

| Term | Definition |
|------------------------------------|--|
| SOD | Ameritech Service Order Distributor. The system distributes errors and completion notices through MOR and then out to the CLECs. |
| SWITCH | Ameritech Central Office Physical Switch Inventory System. The system provides activation and provisioning services for Central Office equipment and interfaces with MARCH for physical switch programming translations. |
| Scalability | The degree to which an application can be scaled to accommodate order of magnitude increases in transaction volumes and users. |
| Supplements | A change to an order taken after the original order was submitted, but before the order has been executed. Order execution should include all supplements. |
| Suspend for Non-Payment | Collection Activity including suspension of outgoing calls (one-way), or both outgoing and incoming calls (two-way). |
| TC Online | Ameritech internet website that contains the documentation CLECs need to conduct business in the Ameritech region. |
| TIRKS | Ameritech Trunk Integrated Records Keeping System which receives service orders and local assignments and reviews critical dates to determine priorities. TIRKS also tracks all jeopardies. |
| TN | Telephone number. |
| TUF | Ameritech translator of USOCs and FIDs, translates ASRs into service orders. |
| Test Call Matrix | A list of call types and the quantity of calls for each type that should be included in a particular test. |
| Test Domain | A specific testing area with defined targets, measures, evaluation methods, and test processes. |
| Test Target | A discrete set of measures to be applied to specific test components. |
| Transaction Driven - GUI Cases | The GUI test method is applied to test cases that use the GUI approach in real-world actions. |
| Transaction-Driven System Analysis | Transaction driven system analysis relies upon initiation of transactions, tracking of transaction progress, and analysis of transaction completion results to evaluate the automated system under test. |
| Transaction Generation | Transaction generation is the use of live, historical, and/or generated data and data processing capability to evaluate an automated and/or manual system under test. |
| Unbundled Access | Ability of other LECs to access and use Ameritech network components to fill in gaps where these providers' networks do not have their own facilities. |
| Unbundled Loop | A transmission channel between an end user location and LEC central office that is not a part of, or connected to, other LEC services. |
| Unbundled Port | An interface on a local switching system that is not bundled with a loop or transport facility, and provides access to and from the switch and the functionality of the local switching system. |
| UNE | Unbundled Network Element. |
| USOC | Universal Service Order Code. A 3-5 character alphanumeric code that represents a product or service. |
| Verification and Validation | Methods used in the evaluation of activities and processes not amenable to data-driven testing, but which require verification and validation. |
| WTN | Working Telephone Number. |